Fourth Grade Math Expectations – First Quarter

**Dear Parents,**

Your child is beginning an exciting year in math.

For the next several weeks, your child will be answering the questions: *What is the purpose of standard units of measurement? How do units within a system relate to each other? How do I recognize what strategy to use for an addition/subtraction problem? How are place value patterns represented in large numbers? How do I demonstrate the relationship between numbers, quantities, and place value for whole numbers up to 1,000,000? What is the difference between a point, ray, line, & line segment? What strategies can be used to verify symmetry & congruency? How are angles measured? How do I explain the meaning of a fraction and its numerator & denominator, and use my understanding to represent & compare fractions?* Your child will learn the following:

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| Use the four operations with whole numbers to solve problems. |
| Students will solve multistep word problems with whole numbers using addition, subtraction, multiplication, or division. |
| Generalize place value understanding for multi-digit whole numbers. |
| Students will recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right.  Students will read and write multi-digit whole numbers using numerals, number names, and expanded form. |
| Use place value understanding & properties of operations to perform multi-digit math. |
| Students will fluently add & subtract multi-digit whole numbers using the standard algorithm.. |
| Extend understanding of fraction equivalence and ordering. |
| Students will explain why a fraction is equal to another fraction.  Students will compare two fractions with different numerators and different denominators. |
| Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers. |
| Students will understand addition and subtraction of fractions as joining and separating parts referring to the same whole.  Students will decompose fractions, for example: 3/8 = 1/8 + 2/8 or 3/8 = 1/8 + 1/8+ 1/8. |
| Solve problems involving measurement & conversion of measurements from a larger unit to a smaller unit.. |
| Students will know relative sizes of measurement units within one system of units including km, m, cm: kg, g: l, oz: l, ml: hr, min, sec.  Students will express measurements within one system, for example: 100cm = 1 m.  Students will use the four operations to solve word problems involving distances, intervals of time, liquid volumes, masses of objects, and money. |
| Geometric measurement: understand concepts of angle & measure angles. |
| Students will recognize angles as geometric shapes that are formed whenever two rays share a common endpoint.  Students will recognize and compare acute, right, and obtuse angles  Students will measure angles in whole-number degrees using a protractor.  Students will solve addition and subtraction problems to find unknown angles. |
| Draw & identify lines & angles, & classify shapes by properties of their lines & angles. |
| Students will draw points, lines, line segments, rays, angles, perpendicular and parallel lines. They will also identify these in two-dimensional figures.  Students will classify two-dimensional figures based on the presence or absence of lines and angles  Students will recognize a line of symmetry in a two-dimensional figure. |

Batesville Public Schools 5/31/12